STRATEGY RESEARCH PROJECT

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JOINT TARGETING: IMPROVING THE PLAYBOOK, COMMUNICATIONS, AND TEAMWORK

BY

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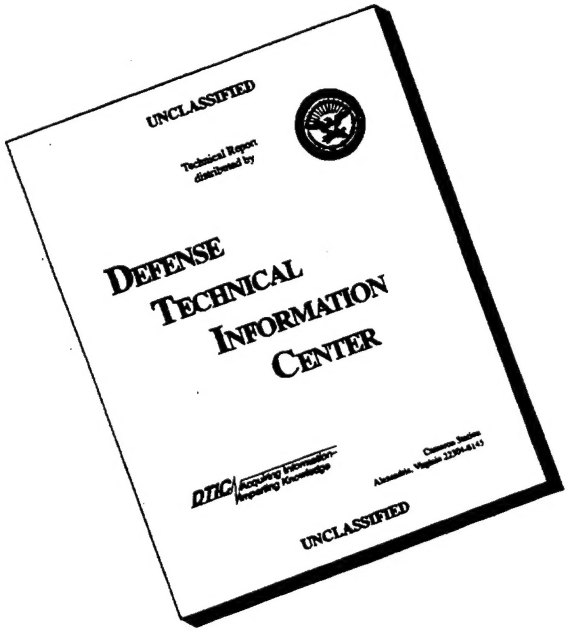

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JOINT TARGETING: IMPROVING THE PLAYBOOK, COMMUNICATIONS, AND TEAMWORK

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ABSTRACT

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Throughout modern military history, joint targeting has been contentious. Service components have not embraced the lessons learned. Operation Desert Shield/Storm provides clear evidence many issues remain unresolved. This paper reviews these issues, joint doctrine, the C4I systems being developed to conduct joint targeting, and provides needed recommendations. Specifically, this paper reviews the organizational structures needed to conduct joint targeting, and provides justification for trained and ready standing targeting organizations. Additionally, recommendations include the need for standardizing within joint doctrine the target sets, their components, the target numbering system for mobile targets, the attack and destruction criteria. Having these available to joint force commanders (JFC) will facilitate their ability to provide a clear, succinct, and graphic commander's intent, and clarify for subordinates what JFCs want done to the enemy. Finally, this paper concludes with recommendations concerning the need to ensure the C4I "system of systems" being built incorporate the standardization discussed so that once the decisionmakers decide on the priority targets he wants attacked, the appropriate intelligence and attack systems are tasked through automated systems to track and attack these targets. Having a smaller military demands we fix the unresolved issues; this paper provides some of the needed fixes.

Introduction

During Desert Shield/Desert Storm (ODS), US forces demonstrated the successful use of joint operations and joint targeting. To make future joint forces even more successful, we study lessons learned and incorporate them in training, doctrine and operations. Analysis of the targeting process used to plan and execute ODS's air phase of the campaign provides valuable lessons learned. Using these lessons, we will significantly enhance future joint operations effectiveness.

During ODS, General Schwarzkopf, USCINCCENT (Commander, Central Command), briefed General Powell, CJCS (Chairman, Joint Chiefs of Staff), concerning the air operations. He provided his vision of what he wanted done to the enemy and the desired effects of his air component's actions (what he wanted targeted and attacked).

> We will initially attack into the Iraqi homeland using air power to decapitate his leadership,command and control, and eliminate his ability to reinforce Iraqi ground forces in Kuwait and Southern Iraq. We will then gain undisputed air superiority over Kuwait so that we can subsequently and selectively attack Iraqi ground forces with air power in order to reduce his combat power and destroy reinforcing units.[1]

Without a doubt, General Schwarzkopf knew precisely what he intended joint air operations to accomplish. Further, he articulated his intent crisply, succinctly, and graphically.
The success of air operations and its contributions to the overall campaign are well documented. Military and civilian leadership agree that such quality guidance is essential to successful prosecution of future wars.

But what was the process that took us from the CINC's overall campaign intent to air operations' objectives, targeting and attack priorities? Has the joint team agreed on the process and the organizational structures needed to realize the commander's intent? Has the joint team identified the methods to achieve similar outcomes in the future? Are these methods clearly stated in joint doctrine? Are the target sets, their components, and the terms used to decide on the appropriate attack and criteria for level of destruction clear and executable? Are there efficient C4I (command, control, communications, computers, and intelligence) means available to transmit, receive, and execute this guidance? Is a joint synergistic effort working to develop the C4I systems necessary to streamline the decision-making process, then to appropriately distribute and effectively execute the process? The potentially disastrous consequences of not synchronizing joint targeting in the future lends urgency and demands an answer to these questions. We must examine the process, the product and the means for transmitting, receiving and executing the product.

Joint warfare is team warfare;[2] joint targeting is also a team effort. JFCs must effectively integrate and synchronize air, land, sea, subsurface, space and special operations forces to target the enemy throughout his battlespace and to attack the enemy with overwhelming force from different dimensions and directions to shock, disrupt and defeat opponents. Since we will use a smaller force with less assets in future wars, JFCs must use joint intelligence and attack assets efficiently, effectively and decisively. If joint targeting efforts are effective, JFCs should not need to mass maneuver forces to defeat our opponents.

Yet, for all the importance placed on targeting, the process and organizational structures necessary to plan and execute joint targeting remains unclear in doctrine. Historically, the process is contentious, so the product of the targeting process is less predictable and effective than it should be.

This paper examines the process and organizational structures necessary for formulating joint targeting. It recommends changes to joint doctrine. Additionally, this paper examines doctrine to determine if the fundamentals of joint targeting - such basics as the target sets, desired effects terminology, and attack/destruction criteria - are clear. Finally, the paper will examine some of the means used to transmit, receive, and execute targeting guidance. It provides recommendations for future focus. This paper does not attempt to present an inclusive, detailed study of the history of joint targeting procedures, doctrine or C4I systems. Rather it focuses on needed changes and recommendations.

Before providing a brief historical overview of joint targeting beginning with World War II (WWII) through ODS, we must agree to some basic, fundamental principles. Without agreement to the following basic principles, we create our own fog of war and introduce our own friction into operations, thereby reducing our chances of success.

Basic Principles

Unity of effort requires JFCs get the joint team on the same playbook. Joint doctrine offers the team a common perspective from which to plan and operate; it fundamentally shapes the way we think about and train for war. Doctrine provides a military organization with a common philosophy, a common language, a common purpose, and a unity of effort.[3] Doctrine undergirds every action that contributes to unity of purpose. Doctrine expresses what warriors believe about warfighting; it translates their will to fight into effective, decisive action.[4]

Sports teams are no different from participants in joint operations. Ask any coach. He will tell you that for a team to be successful, it must play together - unify its efforts. To obtain unity of effort, the coach must get the team to understand and execute the plays in the playbook. For example, before the team can run a complex offense, players must understand and execute the fundamental principles of blocking. Knowing the plays does not mean the team must rigidly follow them. Creativity and flexibility are part of the game. So, the quarterback may design a play in the huddle that deviates from the play in the playbook. Plays help synchronize the team. Without any plays, the team plays in chaos. Very few teams win when they play chaotically.

Joint operations are no different. **Joint doctrine provides the joint team its playbook,** and helps ensure joint operations are not chaotic. It provides the fundamental principles of how the joint team should best employ military power to achieve strategic ends. It is authoritative in nature, but it is not policy or strategy. It is not dogma. It allows for flexibility. Each joint publication begins with an assertion of the commander's freedom of action: "This doctrine will be followed except when, in the judgement of the commander, exceptional circumstances dictate otherwise."[5]

But joint doctrine should not be discarded in the heat of battle, unless the JFC decides it is absolutely necessary. Such disregard of doctrine only adds to the fog of war, creates mistrust and inaccurate perceptions, especially among subordinates and coalition forces who may be unaware the issue is contentious, and changes to doctrine and operations are being made.

For example, the approved JFACC (Joint Force Air Component Commander) responsibilities specified in JCS Publication 26 (now Joint Pub (JP) 3-01.2) issued 1 April 1986 and the "Omnibus Agreement" agreed on by the Chiefs of each Service have been contentious since their inception, but they must be followed. In a message communicating their decision, the Chiefs noted "the JFACC's responsibilities will be assigned by the JFC (normally those include, but are not limited to, planning, coordination, allocation, and tasking based on the JFC's apportionment decision)."[6] In an "Omnibus Agreement," the Chiefs also confirmed the policy, which governs the command and control of Marines aviation:

> The Marine Corps Air-Ground Task Force (MAGTF) Commander will retain operational control of his organic air assets...The MAGTF Commander will make sorties available to the JFC, for tasking through his Air Component Commander, for air defense long range interdiction and long-range reconnaissance. Sorties in excess of MAGTF direct support requirements will be provided to the JFC...[7]

The decision of the Joint Chiefs to grant authority to theater commanders to create a JFACC was balanced against Marines demands that its Air-Ground Task Force aviation not be removed from the control of the MAGTF commanders.

During ODS, this issue remained contentious. General Schwarzkopf believed he resolved the issue by appointing General Horner his JFACC, giving him the authority and complete responsibility to plan and execute the air phase of the campaign. But this initiative did not completely resolve the issue. The Marines retained control of the majority of their air and provided minimal air support to the JFACC, ensuring this issue did not become significant.[8]

Current doctrine further emphasizes these principles. Joint Publication (JP) 3-56.1, Command and Cotrol of Joint Air Operations, specifies that the JFC may designate a JFACC whose responsibilities include planning, coordinating, allocating and tasking joint air operations. Additionally, JP 3-56.1 states:

> component commanders make capabilities/forces available to the JFC for tasking to support the joint force as a whole based on assigned component missions and JFC guidance. These capabilities/forces are tasked directly by the JFC or by the JFACC based on the JFC's air apportionment decision.[9]

Bottom Line - We must discipline the joint team to follow established, agreed on doctrine. One of the hallmarks of military organizations is discipline. Doctrine provides the guidelines; we must follow it. Recently, one of the Service Chiefs stated that the current Chiefs all agree that we must continue to work together to write joint doctrine and that we must follow it. Resourcing and training our smaller, lethal future military force demands this discipline. As LTG Waller, Deputy USCINCCENT, stated and this service chief reiterated:

> Let me tell you about one area where I think joint doctrine is broken and we need to fix it...."Every theater is supposed to operate essentially the same when it comes to how Air-Land Battle is fought." I will tell you it looks good on paper. But I haven't found a theater commander yet, especially a theater air commander, that believes or operates by it.[10]

Parochialism, petty differences and interservice rivalries are detrimental to teamwork. They detract from joint performance. The team must put these aside. There is no place for this kind of rivalry that seeks to undercut or denigrate fellow members of the joint team. We must harness all our energies and focus them on our enemies.[11]

Before discussing recommended changes to joint doctrine, we must therefore agree to the following three fundamental principles:

1. We must develop joint doctrine and discipline ourselves to follow it.

2. We must follow it from theater to theater.

3. We must be aware, as LTG Horner believed, that doctrine does have its limitations. We cannot use doctrine mechanistically or dogmatically in real world operations.[12] However, we must agree that doctrine is the standard; although adjustments can be made from the standard. We must acknowledge that when we make changes, we may create our own fog of war and friction. In time of war, adjustments should be minor. They should be well publicized, back briefed, and rehearsed.

A Brief History of The Joint Targeting

We have noted that historically the services have had their differences on how joint targeting should be accomplished. A brief review of the history reveals the contentiousness of the issues and the need for specificity in joint doctrine.

During WWII, a Joint Board of the Army and Navy was unable to agree on the joint targeting process, air mission targets and priorities.[13] In fact, during the European campaign, combined civilian and military groups were established to develop air mission targets and priorities. In the Pacific campaign,

> no single agency had the responsibility or authority to tie all the analyses conducted by the different services together. The principal agencies lacked the access to the available sources of intelligence and operational information. Also, the personnel in those agencies did not have the adequate training in the techniques of target analysis and selection. The lack of a centralized analysis agency led to redundancy or left the potential for key information to slip between different agencies.[14]

To centralize the planning process, the Joint Chiefs formed a Joint Target Group (JTG). The JTG worked in Washington, DC, and provided input to General MacArthur and the theater. The war ended before the JTG could offer recommendations for target sets that could support the campaign plan.

Lessons learned from WWII did not alleviate this contentious issue during the Korean War. Service differences again caused serious disagreements. Using his WWII experience, General MacArthur formed a General Headquarters Target Group (GHQTG). Unlike the WWII situation, the group was in the chain of command, not in Washington, DC. However, they were not target experts, so their ineffectiveness further angered the services. "Out of 220 primary and secondary targets designated by the group, some 20 percent of the targets came from defective maps and did not physically exist."[15]

Due to the ineffectiveness of the GHQTG, General MacArthur established a Far East Command (FEC) Target Selection Committee, consisting of senior officers from each service to take over the targeting task. Through this committee, the targeting function, coordination and deconfliction improved. However, the Navy stopped participating in the FEC Target Group, claiming they needed to remain autonomous due to targeting oversight restrictions. The subsequent absence of Naval air did not allow for the true integration of joint air power.

Additionally, the Army and the Air Force debated the issue of close air support (CAS) and air interdiction (AI). The Army and Marines believed the Air Force was ignoring their air power requests while the Air Force believed the Army and Marines wanted to piecemeal air resources to fight individual battles, thereby sacrificing their ability to conduct effective AI.

As the Korean War ended, these same targeting issues were left unresolved. They inevitably resurfaced during the Vietnam War. Again the Navy refused to give up their aircraft during Rolling Thunder, the air operations plan designed by the Rolling Thunder Target Team (RTTT) , to bomb North Vietnam. The target team initially was not even joint; it consisted of an Army and Navy representative only. But due to the large workload and need for Air Force participation, they added representatives to the team.

Simultaneously, General Westmoreland, the overall Commander of Forces in Vietnam, in conjunction with Admiral Sharp, Pacific Forces commander, established a Rolling Thunder Coordinating Committee (RTCC) in the Pacific. The RTCC submitted their target nominations to the RTTT in Washington, DC. The RTCC target nominations generally were included in the RTTT's target list, which was subsequently submitted to the Secretary of Defense, reviewed and approved by the President.

As if this process was not difficult enough, Strategic Air Command (SAC) autonomously controlled the targeting and execution of the B-52s. Lack of coordination then led to duplication of effort: "Sometimes it caused the two air forces to hit the same target while other targets went untended."[16]

Nevertheless, the process of joint targeting did improve. Establishing joint targeting teams improved the target development process, as well as the coordination and deconfliction process. However, on-going problems since WWII contributed to issues during ODS.

Operations Desert Shield/Storm

General Schwarzkopf used lessons learned from previous wars and joint doctrine to resolve some of these issues. For example, as specified in joint doctrine, he designated Air Force LTG Horner his JFACC, assigning him responsibility for all air operations in theater. He left no doubt about who was in charge of theater air operations: "There's only going to be one guy in charge of air: Horner. If you want to fight your interservice battles, do it after the war." [17]

Through this initiative, the CINC resolved many of the traditional Air Force and Navy command and control problems. However, Navy planners again did not fully participate in the joint targeting process for two reasons. First, the restrictions placed on them by the JFACC did not allow them the independent, autonomous operations to which they were accustomed. Secondly, the Navy resisted the concept of centralized control because the Navy had not "adequately developed or trained for the coordination and control of theater air operations at the operational level."[18]

The Navy limited their participation in the targeting process by not augmenting the JFACC; the Navy wanted direct approval authority over naval air strikes. The process, however, took too long so the Navy used a small NAVCENT staff located in Riyadh to coordinate their targeting responsibilities with the JFACC. The Navy's reluctance to defer to the JFACC "created friction and distrust between the COMUSNAVCENT (Commander, Navy Central Command) main staff and the JFACC throughout the campaign."[19]

But this was not the only problems the JFACC had to manage. As they prepared to launch ODS's ground offensive, the ground commanders - to include the Marines and Army Corps Commanders - protested over the perceived amount of air apportioned for preparation and shaping the battlefield. Initially, the process was simple. Each Corps would submit their targets to ARCENT (Army Central Command). ARCENT would then consolidate them and would forward their target nominations to the JFACC. The Marines would send their targets to MARCENT (Marines Central Command). MARCENT would forward their target nominations to the JFACC. The JFACC would consolidate the two lists and plan to service the targets as air resources became available. Although they knew of this process, the ground forces commanders perceived the JFACC planned to service very few of the targets they had nominated. In short, they did not trust the system.

In fact, their perceptions were somewhat accurate for three reasons. First, many of the targets nominated had already been attacked or did not exist; their corps intelligence data was obsolete. Second, unknown to the corps commanders, the CINC's primary target was the Iraqi Republican Guard; he prohibited the JFACC from attacking other units that were below 50% strength. Third, because General Schwarzkopf acted as the land component commander (LCC) as well as the CINC, he interacted directly with the JFACC and adjusted priorities, sometimes at the last minute. For these reasons, the ground commanders misunderstood what the JFACC was doing. So, they became frustrated and began to mistrust the JFACC and the targeting process.

The CINC stepped in and established a Joint Target Coordination Board (JTCB). As per joint doctrine, the JTCB *may* be a joint JFC-level review mechanism. Or it may be an integrating center that reviews target information; develops targeting guidance and priorities; validates target nominations/lists of targets from subordinate commands; refines and revises Joint Target Lists (JTLs); coordinates and deconflicts joint targeting operations. That is, JFCs define the role of the JTCB.

General Schwarzkopf appointed his DCINC (Deputy Commander), LTG Waller, to be head of the board. In ODS, the CINC directed his DCINC and the JTCB to review only the ground commanders' target nominations. In an effort to keep the ground commanders happy, the JTCB "allocated sorties equally between them so that each felt they got their fair share."[20] The JTCB did alleviate the situation, but it did not totally resolve the situation. Enemy units were not equally spread across the front, so ground commanders still complained about not getting adequate support.

The CINC's use of the JTCB mollified some of the frustration between the ground component commanders and the JFACC. However, the targeting process and the utility of the JTCB remain unresolved issues even after ODS.

Joint Doctrine/Joint Targeting System

Joint doctrine is improving. But it does not clearly resolve these targeting issues for numerous reasons. First, much of joint doctrine is new or in draft, especially the publications dealing with joint targeting. Second, joint doctrine writers are experiencing difficulties in resolving issues and therefore publishing clearly formulated doctrine. For example, JP 3-09, Doctrine for Joint Fire Support, one of the overarching manuals that provides guidelines for the synchronization of joint fires and the joint targeting process, is still in draft, its third draft. Joint doctrine writers have been attempting to achieve consensus and publish JP 3-09 since 1991.

Third, the joint staff, combatant commands, and services have derived coordinated joint processes for coordinating, planning and executing joint targeting, in multiservice doctrine, training, and requirements that are "stovepiped." These processes are formulated in isolation; they are not integrated.[21] For example, FM 6-20-10/FMFRP 6-6-20-10, Tactics, Techniques, and Procedures for The Targeting Process, developed by the Army, Air Force, and Marines, and approved and used by the Army and Marines, provides an excellent overview and specifies details necessary to conduct joint targeting. However, it is a multiservice field manual, not a joint manual. So, the entire joint community will not utilize it.

Fourth, draft joint doctrine is also "stovepiped." Organizations mentioned in one publication are not mentioned in other related draft publications. For example, Draft JP 2-01.1, Joint Tactics, Techniques, and Procedures for Intelligence Support to Targeting, establishes a Joint Target Steering Group (JTSG) at the theater/combatant command/CINC level. "The JTSG advises the CINC on broad targeting issues involving mission objectives, shifting of campaign priorities or focus of effort, strategic targets, BDA (Battle Damage Assessment), and special programs."[22]

General Schwarzkopf could have established a JTSG during ODS. However, the JTSG was not introduced in Draft JP 2-01.1 until after ODS. His JTSG could then have provided oversight to the JTCB and reviewed with the CINC his theater wide vision for targeting. The JTSG could have resolved issues the JTCB, JFACC and components had directly with the CINC. The CINC could have had his DCINC chair both the JTSG and the JTCB, and expanded his authority as his Deputy Commander, to task service components for intelligence and attack assets to conduct joint targeting. "In off-the-record postwar interviews, representatives of the Marines Corps and the Joint Staff argued that General Schwarzkopf probably made a mistake in not creating such a board."[23] Establishing a JTCB and/or JTSG would have helped.

But the JTSG is not mentioned in Draft JP 3-09, nor in approved joint doctrine JP 3-0 or JP 5-0. Part of the reason for this for this oversight is that the Army is the component responsible for writing Draft JP 3-09. The lead agency for writing Draft JP 2-01.1 is the J2, Joint Chiefs of Staff. We need closer coordination with service components and other staff as we formulate joint doctrine.

Finally, only Draft JP 2-01.1 provides a complete diagram or model for the joint targeting process. It describes the associated organizational structures,[24] and specifies the functional relationships among the components, the JFC, the combatant commanders, and the national level.[25] (See Annex A) These issues are addressed in other joint publications, but the big picture is not. Unless users such as other joint staff members and components review other joint publications, they are unaware of the model. They are deprived of the complete picture. We need to closely coordinate and synchronize joint doctrine.

So that joint doctrine does not become dogmatic, it is written to allow the JFC flexibility. For example, joint doctrine specifies that JFCs ***normally*** designate a JFACC[26] and JFCs ***may*** establish a JTCB.[27] Joint doctrine does not clearly indicate when the JFC should designate a JFACC or establish a JTCB.

Joint doctrine is unclear about who will coordinate and deconflict the targeting process if the JTCB does not do it. The J3 ***may*** choose to form a new staff section or division to accomplish this mission. In some theaters, JFCs use their Joint Force Fires Coordinator (JFFC) and his staff ***if available***. Draft JP 3-09 discusses the roles and functions of the JFFC, and points out a JFFC is needed across all theaters.[28] In ODS, according to the J3, CENTCOM, "CENTCOM's operations staff " could not have accomplished this task.[29] A small JFFC staff also most likely could not have accomplished this task; a JTCB was needed.

Recommendations Concerning the Joint Targeting Process

Joint doctrine should be clarified. Organizational structures are needed to conduct joint targeting efficiently and effectively. The criticality and complexity of joint targeting mandates that basic JTCB[30] and JFACC structures should be standardized in joint doctrine and organized as standing organizations.[31] These groups should have members from all service components; likewise, they should regularly train together. For example, in the Korean theater, the CINCCFC (Commander, Combined Forces Command) has a trained and ready standing JTCB and JFACC organization. No longer is his targeting organization manned by untrained liaisons as in the past, but rather by trained targeteers.

Creating JTCBs will ensure that service component targeting organizations know who and what organization to which they coordinate their target nominations. For example, the Army's Deep Operating Coordination Cells (DOCC) found at Corps level, Army level and Joint Force Land Component Commander (JFLCC) level; the Marines Force Fires Coordination Center (FFCC); the Navy's Fire Support Element (FSE), its Supporting Arms Coordination Center (SACC); the Air Force's key TACS (Theater Air Control System) element, its Air Support Operations Center (ASOC); special operations forces SOLE (Special Operations Liaison Element) and/or SOCCE (Special Operations Command and Control Element); and coalition force FSEs will coordinate their target nominations with the JTCB.

In addition, the JTCB can help the JFC to prioritize targets, to build a Joint Target List (JTL), and given the authority by the JFC to his Deputy Commander, to task the appropriate intelligence assets to locate and verify their locations, to request additional intelligence assets as needed, to ensure priority targets and their locations are forwarded to the appropriate attack assets, to ensure the appropriate intelligence assets are tasked to provide BDA, to retask attack assets, and finally to provide feedback to service components concerning their target nominations and BDA. The JTCB can help the JFC to ensure that duplicate intelligence assets are not tracking the same target and similarly, duplication of use of attack assets is planned and executed efficiently and effectively.

Similarly, JTSGs, as noted above, must be standardized from theater to theater. The JTSG should consist of senior level component commanders and/or their representatives. They ensure the CINC/JFC's intent, his guidance and priorities for targeting are being properly executed. For example, in the Korean theater of operations, the CINCCFC has established a Combined Targeting Board (CTB) that coordinates, deconflicts, and synchronizes deep operations in Korea.[32] Within the CTB is a CTB Executive Board that acts as the JTSG for the CINCCFC.

> It is the senior committee within the CTB, and is responsible for overseeing the synchronization and integration process of joint targeting. It accomplishes this by reviewing the CINCCFC's overall guidance and intent, reviewing the Synchronization Cell's future courses of action and providing recommendations, identifying the requirements of the components, issuing instructions to the Combined Targeting Cell (Korea's version of the JTCB), evaluating and approving the single prioritized integrated target list (SPITL), developing the apportionment recommendation, and monitoring the Integrated Target Order published by the Combined Planning Cell.[33]

Other theaters should follow the example set by the CINCCFC. Targeting personnel would then be more clearly trained and ready to accomplish their duties and responsibilities when they move from theater to theater.

If the JFC is a subordinate commander to the combatant CINC, he may establish an executive targeting board with essentially the same mission as the JTSG. In addition to reviewing the subordinate JFC's intent for joint fires and targeting, his JTSG would coordinate additionally needed intelligence and attack assets with the combatant CINC's JTSG. The JTSG would then coordinate with the Joint Chiefs of Staff and the NCA for additionally needed intelligence and attack assets. As necessary, the CJCS could provide and receive approval from the President for target nominations. Combatant CINCs should organize and train for combat in this manner.

A JFACC, an airman with responsibility and authority for all air in theater, would ensure that air power is centrally planned and control is integrated, rather than fragmented, as in Vietnam. The JFACC and his staff, in conjunction with the JTCB, will assist the JFC in determining the proper balance among competing demands for joint fires: strategic attack, AI, joint fire support, and CAS (See Annex B).[34]

In accordance with Draft JP 3-09, joint fires overlap; they are complementary and interdependent.[35] Specifically using air power, the JFACC helps ensure that effective joint fires, are conducted throughout the theater, that appropriate targets are prioritized, that intelligence assets are tasked to locate and verify their location, that attack assets are prioritized and tasked, that intelligence assets are tasked to determine BDA, and whether targets should be reattacked.[36] If the JFACC cannot track or service targets on the JIPTL (Joint Integrated Prioritized Target List), he forwards the target to the JTCB. Given authorization by the JFC, the JTCB initiates taskings to other components for intelligence and attack assets to track and attack the targets.

Standing JFACCs, trained in conjunction with JTCBs and JTSGs, are needed in all theaters.

> Though limited resources preclude maintaining large standing air component staff for every contingency, it makes sense to have a small, trained cadre augmented by liaison officers from each component as well as trained personnel seconded in times of crisis. Such a mix can foster mutual trust, ensure the correct blend of capabilities, and furnish air assets to implement the myriad requirements of the JFC's concept of operations.[37]

Minimally, standing JFFCs and staffs are needed across all combatant commands. Without a JFFC, the JFC has no single joint staff officer or agency assigned to advise the JFC and coordinate all means of joint fires.[38] The JFFC should be a principal member of the JTSG and JTCB; his primary responsibility is to coordinate the synchronization and integration of joint fires. As the principal staff officer for joint targeting within the JFC's J3, the JFC may expand the JFFC's role and may authorize him to task service components for their intelligence and attack assets to conduct joint targeting. His duties may become overwhelming, and depending on the mission and his responsibilities would be transferred to a JTCB.

Joint Fires Targeting

As noted, joint fires consists of strategic attack, AI, joint fire support and CAS. Joint fires are complementary and interdependent. Traditionally, however, the services have argued on the appropriate balance between these fires. The Air Force and Army disagreed over the amount of support devoted to CAS and AI during the Korean War and ODS. The following message from ARCENT to the JFACC reflects this disagreement:

> Air support-related issues continue to plague final preparations for offensive operations and raise doubts concerning our ability to shape the battlefield prior to initiation of the ground campaign. Too few sorties are made available to VII and XVIII Corps while air support missions are being flown against first-echelon enemy divisions, Army nominated targets are not being serviced. Efforts must be taken now to align the objectives of the air and ground campaigns, and ensure the success of our future operations.[39]

The CINC established a JTCB to resolve the issue. Ground commanders, to include the Corps Commanders, were satisfied after the JTCB became involved. The JTCB gave them some priority for CAS and provided feedback concerning their target nominations. Prior to formation of the JTCB, "the absence of such a board meant that a formal communications channel did not exist for Army Corps commanders to express their concerns to the CINC and JFACC about targeting."[40] So a JTCB increases the trust and confidence that all the components of joint fires are being heard and receiving the appropriate priority.

Additional changes made to joint and service doctrine since ODS have also helped resolve some of the traditional issues and have thus built trust and confidence. For example, the Air Force has reaffirmed its mission responsibility to provide CAS in recent Congressional testimony[41] and in Air Force doctrine, AFM 1-1,[42] while the Army has recognized the importance of conducting strategic attacks in FM 100-5.[43] The Air Force recognized that AI and surface operations should be planned and executed to complement and reinforce each other,[44] even though they no longer accept BAI (Battlefield Air Interdiction) as a mission.

By establishing a JTCB, JTSG, JFACC, and a JFFC, and by including CAS, joint fire support, AI and strategic attack as part of joint fires, the joint community has put organizational and operational components in place to ensure ground commanders receive the appropriate priority to prepare and shape future battlefields without the doctrinal need for BAI. Joint doctrine should then read JFCs are now authorized to hold these organizations and component commanders responsible for planning and executing joint fires against targets throughout their battlespace. In short, we now have a structural solution to the issue of targeting in joint operations.

Joint Target Sets and Destruction Criteria

The operations order and master air attack plan that guided the initial phases of Desert Storm reflected the following air operations objectives:

> Destroy/neutralize air defense command & control
> Destroy NBC storage & production capability
> Render ineffective national & military command, control & communications infrastructure
> Destroy key electrical grids & oil storage facilities
> Eliminate long-term offensive capability
> Render the Republican Guard ineffective[45]

To achieve these objectives, the strategic attack plan specified attacking the following target sets:

> (1) leadership command facilities;
> (2) electricity production facilities;
> (3) telecommunications and command, control, and communications (C3) nodes;
> (4) strategic IADs (Integrated air defense systems);
> (5) air forces and airfields;
> (6) NBC research, production, and storage facilities;
> (7) SCUD missiles, launchers, and production and storage facilities;
> (8) naval and port facilities;
> (9) oil refining and distribution;
> (10) railroads and bridges;
> (11) the Republican Guards;
> (12) military storage and production sites;
> (13) breaching sites, and
> (14) air defenses in the KTO.[46]

Joint doctrine remains unclear about what target sets, desired effects and attack/destruction criteria should be used to plan joint fires. In fact, the target sets used to plan the ODS strategic attack were not listed in joint doctrine. Today they are provided in Draft JP 2-01.1 in a diagram called the "Inside Out of Joint Doctrine" (See Annex C).[47] However, Draft JP 2-01.1 does not identify these rings as a model for targeting, and offers no further explanation of the model. It simply refers the reader to JP 2-0, Appendix B, where they are not even mentioned.

COL Warden, USAF (Ret.), one of the principle planners for the strategic air attack in ODS, developed this five-ring conceptual model for defeating a nation-state by attacking the enemy's centers of gravity and causing "strategic paralysis." In the center of the five rings is the most critical element, the national leadership. Outside this ring is key production, followed by national infrastructure, national population, and fielded military forces. The Air Force has not written COL Warden's concept into their doctrine because they do not agree on how best to achieve results in the shortest time: strategic attack or direct attack against enemy forces.[48]

Draft JP 2-01.1, Appendix B, also provides BDA target sets and recommends they be "used by the BDA community to insure standardization." (See Annex D)[49] However, they are not mentioned in the body of the joint publication. No where does the publication recommend them for use in planning joint targeting. In addition, they are not mentioned in Draft JP 3-09.

JP 3-05.5, Joint Special Operations Targeting and Mission Planning Procedures, provides a similar list for Special Operations Forces to use for target planning (See Annex E).[50] FM 6-20-10/FMFRP 6-6-20-10 lists a different group of target sets (See Annex F).[51]

The Defense Intelligence Agency's IDB (Intelligence Data Base), formerly known as AIF (Automated Installation File), provides additional target sets, components of these target sets, and actual target information. "The AIF (or IDB) serves as a menu from which planners can select, or exclude, targets to achieve the objectives of any contingency or operation."[52] The IDB is mentioned in Draft JP 2-01.1, but it does clearly indicate the IDB provides the standardized list of joint target sets. (Note, Draft JP 2-01.1 states it provides only fixed site targets and target numbers.[53] A standard format for numbering mobile targets is also needed in joint doctrine).

Additionally, joint doctrine does not clearly specify whether different target sets are required for the various components of joint fires (strategic attack, AI, joint fire support and CAS). JFCs may decide to plan targets, track targets, and attack targets differently for each component. For example, the targets identified in a strategic attack designed to "strategically paralyze" the enemy may be different than those associated with joint fire support and CAS. Joint doctrine does not clarify how targeting priorities may change in relation to different missions.

Bottom Line - We must standardize the target sets, the components of each target sets, and what target sets should be used to plan each component of joint fires (strategic attack, AI, joint fire support, CAS) for various reasons.

First, an established set of targets in a standardized format facilitates communications. Such formats provide a common framework for the inclusion and transmittal of essential information. Although formats do not guarantee quality, they can ensure that guidance is comprehensive and facilitate the communication of task-oriented information.[54] In times of crisis, formats become invaluable.

Second, JFCs and joint targeting planners may use these standardized target sets as a decision model for prioritizing assets to track and attack targets. Standard formats facilitate the deliberate sequencing of elements of information relative to their importance.[55]

Third, a standardized list of target sets facilitates JFCs selection of the priority targets he wants tracked and attacked, and his specification of the level of destruction and desired effects he seeks against a particular target set for each component of joint fires. For example, in ODS, the strategic air power attack master plan, specified the following: "render the Republican Guard ineffective, and eliminate the enemy's long-term offensive capability." Describing objectives in mission type orders helps make the JFC's intent more clear.

Further, these examples clarify the need to specifically define and standardize the terms the JFC used to establish the desired effects and the JFC's specific attack/destruction criteria. Currently, joint doctrine allows for the use of various terms to describe the level of destruction or attack criteria, such as destroy, neutralize, suppress, eliminate, disable, degrade, render ineffective, etc.

The JFACC Planning Tool currently being developed to help plan targeting for future theater air operations uses terms such as influence, attrit, neutralize, and destroy.[56] Draft JP 3-09 uses the terms disrupt, delay, and limit, while JFCs sometimes use other terms to describe desired effects.[57] Without standardizing these terms, the JFC's mission type orders may be misunderstood and his desired effects not achieved.

Field artilleryman have long since dealt with these ambiguities. To ensure desired effects and attack/destruction criteria are clear between the ground commander and his fire supporter, the fire supporter must make clear to his commander that Army doctrine specifies three levels of destruction and desired effects: destroy (30% target destruction), neutralize (10% target neutralization) and suppress (10% target suppression).[58] If the ground commander's intent seeks greater damage, his fire supporter and he can change the desired effect and adjust the percentage of destruction. Through the use of automated artillery systems and JMEMS (Joint Munitions Effectiveness Manuals) analysis built into the automated system, his fire support team can efficiently and effectively change the number of volleys or type of munitions to achieve the desired effects and levels of destruction. If the fire supporter does not have the volume of artillery fires available to achieve the desired effects and level of destruction, he may use other attack assets available such as air power to service the target.

Bottom Line - Joint targets planners must clearly understand the JFC's intent. They must then clarify for service components and coalition forces the desired effects and attack/destruction criteria that the JFC desires. Standardizing and limiting the desired effects terms as well attaching an attack/destruction percentage will enhance clarity and understanding.

In addition, joint doctrine should standardize the components of each target set to enhance clarity of what the JFC wants attacked and where he wants BDA collection efforts to focus. For example, does destroy 10% of the first echelon forces mean destroy tanks, artillery and armored personnel carriers or other assets within the first echelon? Precise specifications will decrease duplication of effort. Improved BDA assets will assist in determining whether the attack has achieved the desired effects. All of this improved communication and damage assessment will then free intelligence and attack assets to track and attack other priority targets.

C4I Systems

Finally, ensuring that the target sets and components as well the destruction criteria is standardized will facilitate the creation of needed C4I systems. An automated C4I "system of systems"[59] is needed to enable the JFC, JTSG, JTCB and JFACC to decide which targets are priority targets, to task the appropriate intelligence assets to locate and verify their locations, to ensure targets and their locations are forwarded to the appropriate attack assets, to ensure intelligence assets are tasked to provide BDA on these priority targets, to retask attack assets as needed, and to provide digital feedback to service components concerning their target nominations and BDA.

Future digitization, band width expansion, direct broadcasting, and computer processing will enhance our C4I capability.[60] Technology will move us toward one extended battlefield where shared and integrated systems from all services give us the ability to acquire and strike the enemy throughout the battlefield. Digitally enhanced ground acquisition systems combined with aerial and space-borne platforms, will allow the JFC to detect the enemy across his battlespace. Once the enemy has been detected, complementary systems - ranging from special operations forces to tomahawks - will be selected and tasked to attack priority targets. The extended range of new systems combined with precision munitions and enhanced C4I systems, will provide the JFC with even greater coverage, thereby geometrically increasing his assurance of destruction.

Many improvements have been made since ODS to facilitate the transmission, receipt and execution of joint targeting information. No longer will ATOs have to be flown to the Navy from an Air Force JFACC.[61] CAFMS (Computer Assisted Force Management System) and its old associated transmission equipment and computer terminals has been replaced by other C4I systems, to include the Air Force's CTAPS (Contingency Theater Planning System). The Navy has fielded CTAPS and it is available to the Army for fielding.

The Army's AFATDS (Advanced Field Artillery Tactical Data System) will eventually be able to connect with CTAPS, to digitally receive and process ATOs. Currently, staffs process targeting information and ATOs through manual systems, floppy disk transfers, and long phone calls.[62]

We must ensure interconnectivity between service components, coalition forces, operations and intelligence personnel. Phones and faxes are too slow. We need a fully accessible standard DOD digitized system. We must replace makeshift systems used to interconnect service component and DOD systems. Makeshift systems may not be available in the quantity needed. Further, they may not be sustainable in war.

Currently, many systems are being developed such as CTAPS and AFATDS that will facilitate joint targeting. But not all systems have interconnectivity. The CJCS and the Vice Chairman are fixing this through the JROC (Joint Requirements Oversight Council) process, which focuses all services on building systems that have interconnectivity under the umbrella of the GCCS (Global Command and Control Systems) .[63] Interconnectivity must not be a goal; it must be a requirement. The process is working: Both CTAPS[64] and AFATDS[65] were built to meet this requirement.

Eventually, JFCs, JTSG and JTCB, component commanders, and coalition forces may collaboratively develop and digitally transmit a JTO (Joint Tasking Order), rather than separate orders such as an ATO, and synchronize joint operations and joint targeting. Additionally, the "system of systems" will enhance our sensor to shooter system capability. As we saw in ODS, JSTARS were linked directly to attacking assets (such as ATACMS capable firing units) to attack enemy radar. In the future, C4I systems may (or will) have the capability to direct the target to another appropriate attack asset, thereby freeing up the attack asset to engage a more appropriate and higher priority target.

Conclusion

In the 21st Century, America's smaller, more lethal armed forces must fight as a joint team. To overwhelm the enemy, JFCs must achieve unity of effort, clarity of purpose, and effective employment of our scarce resources to synchronize joint operations.

A key ingredient to successful synchronization and unity of effort is JFC's assured capability to efficiently and effectively plan, transmit, receive and execute joint targeting. To accomplish this and assist future JFCs, organizational structures and the joint targeting process needs clarification in joint doctrine. Trained and standing JTSGs, JTCBs, JFACCs, and JFFCs are also needed throughout all theaters.

Additionally, joint doctrine must clarify the following: target sets, components of these targets, the terminology JFCs should use to provide mission type orders, desired effects and attack/destruction criteria. JFCs will thereby be able to make more efficient and effective decisions concerning the priority targets that he wants intelligence assets to track and attack assets to attack. Increased clarity will help components, staffs, and coalition forces understand the JFC's intent; it will enhance their ability to coordinate, deconflict and synchronize the attack throughout the JFC's battlespace.

In addition, a more enhanced C4I "system of systems" with interconnectivity across all joint forces will ensure that JFC decisions and joint targeting guidance, intelligence and attack assets are efficiently and effectively communicated and used to synchronize joint fires, thereby overwhelming the enemy quickly and with minimal losses.

Bottom Line - We must get everyone using the same playbook and an interconnected automated system to communicate the plays. Clear commander's intent and joint targeting guidance, clarity in joint doctrine, trained and ready joint targeting staffs, and user-friendly C4I will ensure that the joint team is prepared, ready to fight and win together.

The consequences of joint targeting failures are severe; lives will be sacrificed. Successful teams do not play in chaos. They understand the plays and communicate effectively. Joint teams are no different. When joint forces act, they should do it with clarity of purpose and unity of effort. Our country and its armed services deserve no less. The changes recommended in this analysis are overdue. They should be incorporated immediately.

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ANNEX A-RECOMMENDED ORGANIZATIONAL STRUCTURE & FUNCTIONAL RELATIONSHIPS FOR JOINT TARGETING

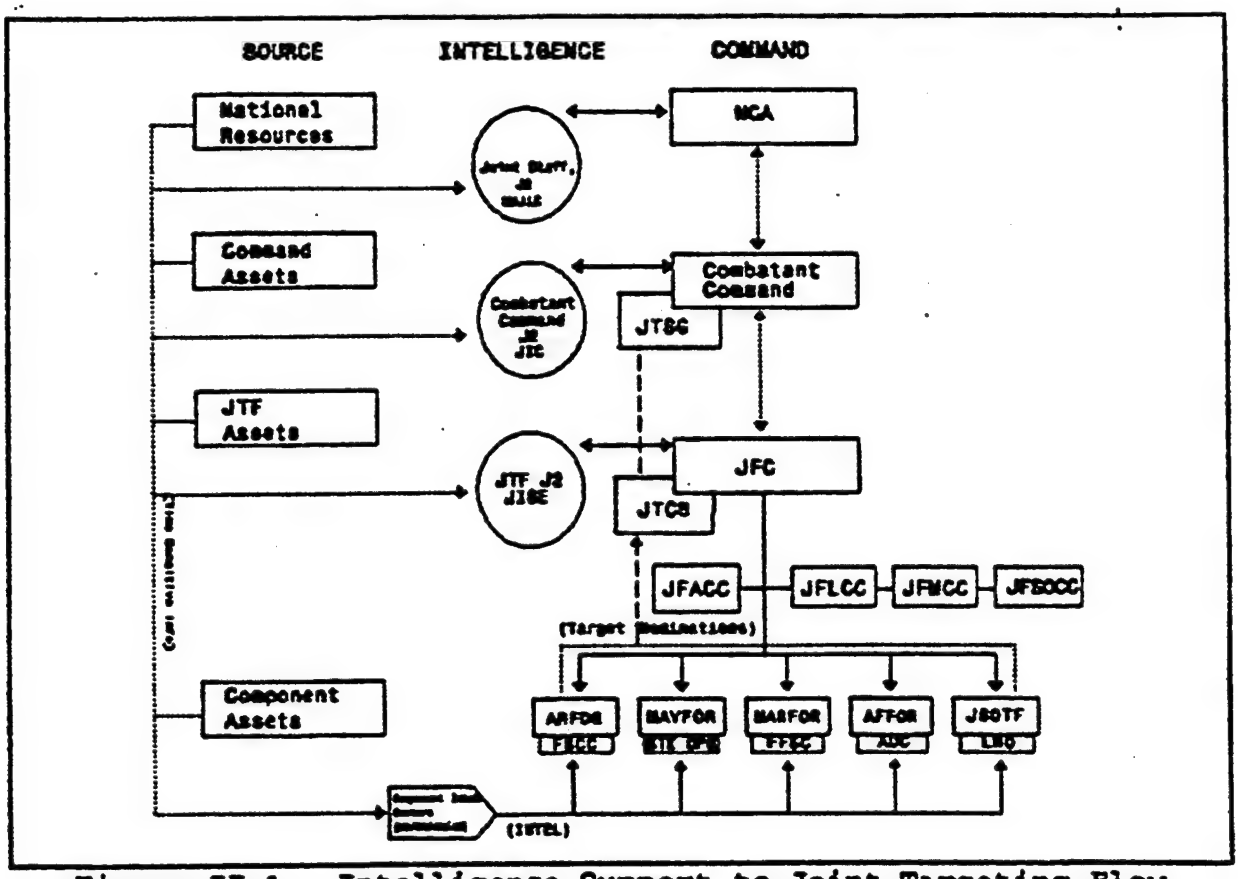

Figure II-1. Intelligence Support to Joint Targeting Flow

7

Table II-1. Functional Relationships for Joint Targeting

Levels of Intel Support	Executive Targeting Organization	Command Authority	Target Processing Centers	Planning Coord Organizations
National	NSC	NCA	NMJIC	Joint Staff
Theater Command and JFC	JTSG	Theater Commander	Command JIC	Command Staff
	JTCB	JFC	JFC JISE	JFC Staff
Air Component	Combat Plans	JFACC	IN	Strategic Planning Cell
Maritime Component	CIC	JFMCC	N2 CIC	NGFCC
Land Component MEF	Corps Targeting Cell MEFTIC	JFLCC MEF Commander	G2 Corps TOC Support Element (CTOSE) MEFTIC	Fire Support Element FSE/Corps Targets Team MEF G3/FFCC
Special Operations Component	JFSOCC Target Panel	JFSOCC	SOJ2	SOJ2/3

ANNEX B-JOINT FIRES

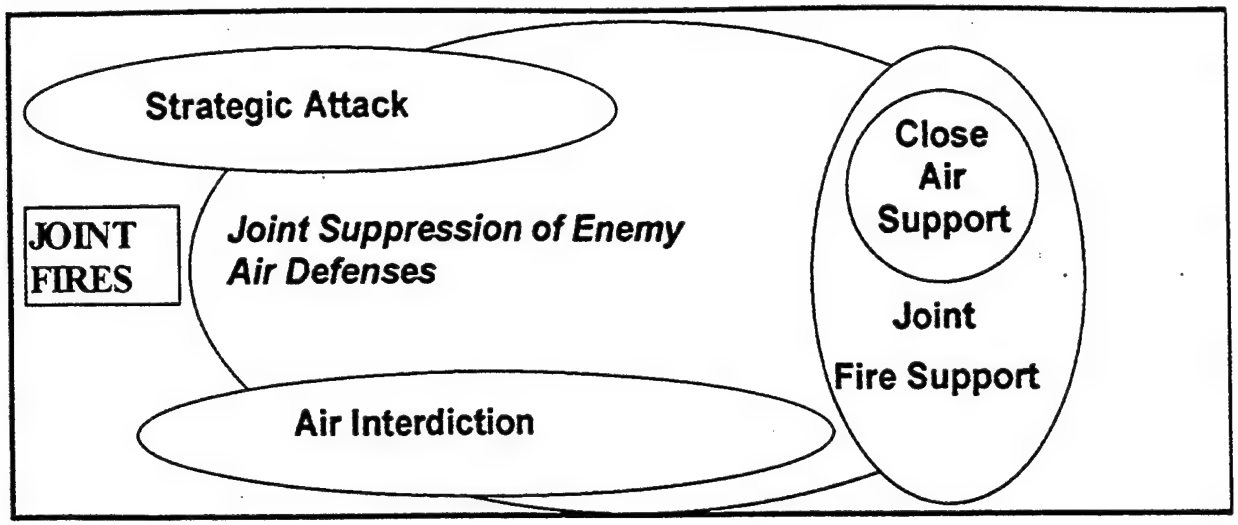

Figure I-1, Joint Fires Overlaps

ANNEX C-COL WARDEN'S TARGET SETS USED IN ODS

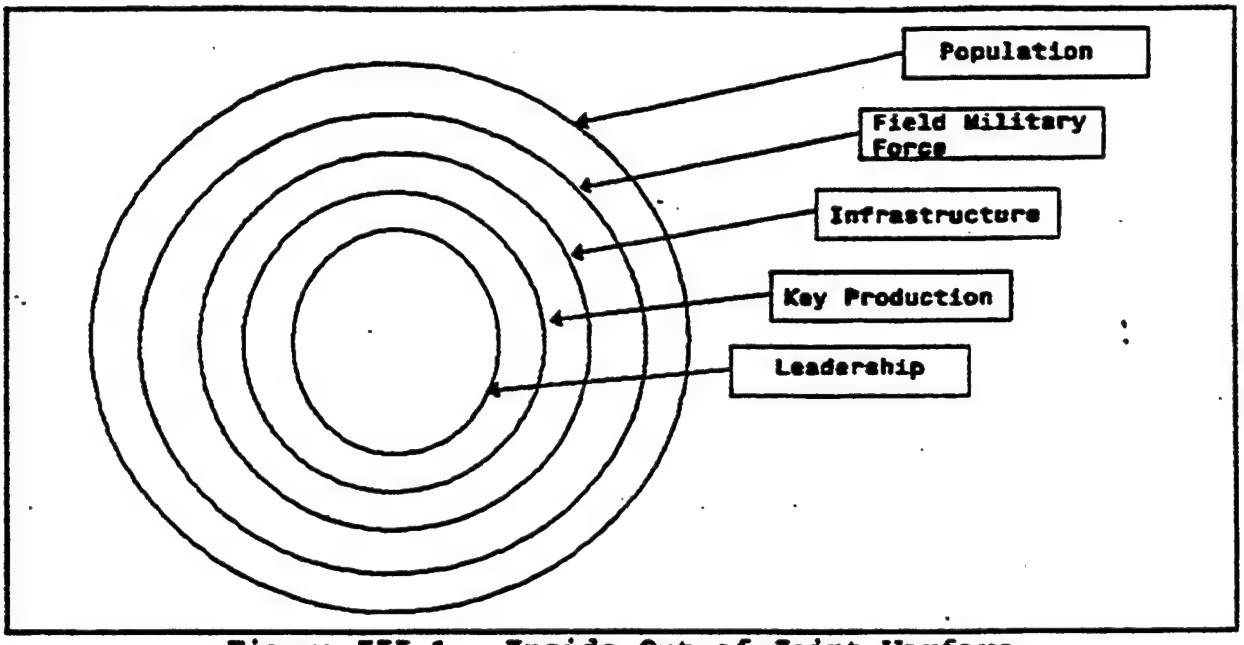

Figure III-1. Inside Out of Joint Warfare

ANNEX D-RECOMMENDED BDA TARGET SETS

Tab C

BDA Target Sets

The Target Sets in listed in this Tab are used by the NMJIC BDA Cell and are recommended for use by the BDA Community to insure standardization. These target sets can be used by the warfighting command to delegate responsibility for BDA reporting to other BDA cells. A detailed breakout of the target categories in each set can be found in the classified attachment to this document. The 16 target sets are listed below:

1. NATIONAL LEADERSHIP (LDR)

   CIVILIAN GOVERNMENT

   MILITARY SENIOR LEADERSHIP

2. WEAPONS OF MASS DESTRUCTION (WMD)

   NUCLEAR

   BIOLOGICAL AND CHEMICAL

3. GROUND FORCES AND FACILITIES (GFF)

   HEADQUARTERS/C3

   BATTLEFIELD SURVEILLANCE/FIRE CONTROL

TROOP FACILITIES

SUPPORT

GOB

4. BALLISTIC MISSILES (MSL)

HEADQUARTERS/C3

OFFENSIVE MISSILES LAUNCH SITES

SUPPORT

OMOB

5. AIR FORCES AND AIRFIELDS (AFA)

HEADQUARTERS/C3

AIRFIELDS

SUPPORT

AOB

6. AIR DEFENSE (ADF)

HEADQUARTERS/C3

EW/GCI FACILITIES AND EQUIPMENT

SAM/ABM/AAA

ELECTRONIC COMBAT ELEMENTS

DMOB, AAAOB

7. NAVAL FORCES AND PORTS (NFP)

HEADQUARTERS/C3
PORTS AND NAVAL BASES
COASTAL DEFENSES
SUPPORT
NOB

8. SPACE FORCES (SPF)

HEADQUARTERS/C3
LAUNCH AND SUPPORT FACILITIES
SPACE ORDER OF BATTLE

9. COMMUNICATIONS, COMPUTERS AND INTELLIGENCE COLLECTION (CCI)

10. ELECTRIC POWER (PWR)

11. LINES OF COMMUNICATION (LOC)

HIGHWAY
RAILROAD
WATERWAYS

12. MILITARY SUPPLY AND STORAGE (MSS)

13. PETROLEUM INDUSTRY (POL)

14. MILITARY INDUSTRY (MIL)

15. INDUSTRY (IND)

TECHNOLOGICAL RESEARCH & DEVELOPMENT

RAW MATERIAL MINING, PROCESSING, AND STORAGE

INDUSTRIAL MANUFACTURING AND PRODUCTION

16. CIVILIAN FACILITIES (CIV)

UTILITIES

MEDICAL

CIVIL DEFENSE

TRADE AND COMMERCE

OTHER FACILITIES

ANNEX E-EXAMPLE TARGET SETS FOR SOF

a. Target system analysis is a systematic approach to determine enemy vulnerabilities and weaknesses to be exploited. It determines what effects will be achieved against target systems and their activities. A target analysis must review the systems and their interactions between components and elements of a target system to determine how the system works and, subsequently, how to attack that system so it becomes inoperable.

b. Critical system analysis focuses on total interaction and interrelationships among multiple target systems. The objective is to determine the most effective way to influence or affect the enemy systems in the most timely and efficient manner.

6. Targets Analysis Definitions. In intelligence usage, a target is a country, area, installation, agency, or person against which intelligence operations are directed. This definition covers most, but not all, of the military, economic, political, or psychological objectives that can be nominated and/or designated for the purposes of destruction, damage, degradation, disruption, neutralization, removal, exploitation, surveillance, or training by SO, PSYOP, or CA forces.

a. A single target may be significant because of its own characteristics. Most often, its importance lies in its relationship to other targets. A systematic examination and evaluation of potential targets requires a vocabulary diverse enough to accommodate a hierarchical system of definitions. The following is a hierarchical set of target definitions used in target analysis.

b. A target system is all the targets situated in a particular geographic area that are functionally related. It also can be a group of targets so related that their destruction will produce a particular effect desired by the attacker. A target system can also be viewed as all targets that encompass the entire system under consideration, which broadens the definition to include SOF missions like FID. It may be international in scope (e.g., international banking) and may include modifying behavior or influencing and altering attitudes vice destruction. Examples of target systems include:

(1) Air transportation systems.

(2) Port facilities.

(3) Highways.

(4) Railways.

(5) Waterways.

(6) Command, control, communications, and intelligence (C3I) complexes or networks.

(7) Bulk electric power supplies.

(8) Bulk water supplies.

(9) Air defense networks.

(10) Bulk petroleum, oil, and lubricants (POL) supplies.

(11) Missile and satellite launch facilities.

(12) Economic infrastructure.

(13) Social welfare infrastructure.

(14) National health infrastructure.

(15) Attitudes of social groups.

(16) Political infrastructure.

c. A target subsystem is a major element of a target system. Generation, transmission, and distribution are subsystems of a bulk electric power supply system.

d. A target complex is a geographically integrated series of target concentrations. A target complex may be a subset of a target subsystem. It consists of related facilities and activities that are located in the same general vicinity. Within a target complex, individual targets will be identified. Ports, airfields, and electric generating plants are examples of target complexes.

e. A target system or complex can be broken down into smaller units called target system components. Each of these may also be a target. A target system component belongs to one or more groups of industries or basic utilities required to produce individual components of an end product. For example, in the POL target system, the atmospheric distillation area of an oil refinery may be considered a target system component.

ANNEX F-ARMY/MARINES STANDARD TARGET SETS

Title and Sheet Number

These specify the tactical situation and enemy unit echelon for which the sheet was developed. The number refers to that specific situation-echelon combination for ease of access.

Doctrinal Template

This shows the major subunits of the enemy organization being considered, deployed to scale, without regard to the effects of terrain and weather. Fire support personnel can use the template to begin planning acquisition coverage and likely areas of interest. However, the template is only a guide.

Doctrinal Resume

The doctrinal resume is a synopsis of the major features of the operation. This portion indicates the objectives of the enemy force and the tactical principles that govern how the unit is supposed to fight.

Failure Option Statement

The failure option statement lists the doctrinal courses of action the enemy can take if he fails in the situational option described. Analysts consider this as they war-game the enemy battle plan. Keep in mind that the options are doctrinal and could vary, depending on factors influencing the actual situation.

Relative Value Matrix

The relative value matrix lists 13 standard target sets or categories covering the major battlefield functions. All targets may be categorized in one of these groups. The 13 target sets are based on the battlefield functions discussed below.

C^3

C^3 stands for command, control, and communications centers. Generally, these are targets that affect maneuver or combined arms C^3. Examples include regimental, divisional, and army CP and traffic control points.

FIRE SPT

This refers to fire support targets. It covers the entire threat fire support system. Subsets include fire support command and control (C^2), weapons, TA, and ammunition logistics. Weapons include cannons, guns, missiles, and fixed- and rotary-winged (attack aviation) aircraft.

MANEUVER

These targets are maneuver tactical subunits in various postures. They are motorized rifle and tank companies, assembly areas, march columns, assault aviation, and advanced guard units.

ADA

This set covers air defense system targets. These include missile unit headquarters and processing centers, radar sites, and short-range air defense platoons.

ENGINEER

This refers to all engineer-type targets. Examples include bridging, ferry units, crossing sites, snorkeling sites, and movement support elements.

RSTA

This group covers reconnaissance, surveillance, and target acquisition assets. RSTA refers to the concept that all intelligence and TA assets are under the control of one manager at each major unit level. Target types include ground surveillance radars, reconnaissance patrols, and airborne sensor systems.

REC

Radio-electronic combat (REC) is commonly known in Western circles as offensive electronic warfare. Some dedicated collection TA assets are listed here instead of under RSTA. The REC targets include communications and noncommunications jammers, radio-radar direction finding (DF) stations, and airborne jammers. There are 23 REC HVT types.

NUKE/CHEMICAL

This set covers nuclear (NUKE) and chemical support elements and major weapon firing positions. Nuclear and chemical targets are always treated as special cases because of the destructive and disruptive nature of the weapons that they support.

CLASS III POL

This target set covers petroleum, oil, and lubricants (POL) support. It is critical because of the level of mechanization of some forces and the projected rates of advance for second-echelon forces. Targets include transport and pipeline units and POL points.

CLASS V AMMO

This refers to ammunition support targets. These include ammo storage sites, depots, and distribution points.

CLASS IX MAINT

This is the set that covers the maintenance and repair capability. The targets include regimental maintenance units, vehicle collection points, and mobile repair facilities.

LIFT

Lift refers to general transport units in threat forces. While there is only one target category, special consideration should be given to heliborne transport.

LOC

This set covers lines of communication (LOC) for which no special target types are designated. However, any target that would interfere with the ground or air LOC, if attacked, is a candidate. Such targets include choke points, bridges, tactical airfields, and railheads.

RELATIVE WORTH

In the relative value matrix, the target sets are rank-ordered according to their relative worth to the enemy operation. The right side of the matrix has a relative value column which indicates the target sets that are considered high-value for the situation. It presents their relative value with respect to each other by use of a simple bar chart. A set with three blocks filled in is not 25 percent higher-value than a set with only two blocks filled in. The blocks are only to indicate the ordering of sets compared with one another. The target sets that are not considered high-value are not assigned a bar value.

DISRUPT, DELAY, LIMIT

The left side of the matrix consists of three columns labeled **"DISRUPT," "DELAY," and "LIMIT."** An **X** in a column associated with a target set indicates that a benefit may be accrued by attacking the target with one of these particular goals in mind.

Elements of a target set could conceivably be attacked to disrupt, delay, and limit depending on the target and the situation. This part of the relative value matrix is a general guide to desired effects against a target. It may remind planners that a target need not be neutralized or destroyed to be rendered ineffective.

Disrupt, delay, and limit are not to be confused with attack guidance terms such as suppress, neutralize, and destroy. Disrupt, delay, and limit are the effects that the attack on a specific target set will have on the echelon being faced. The targeting cell determines the effect desired. This determination is based on the combined arms commander's concept of operation. The amount of ammunition to use or the intensity of the attack (suppress and so forth) is not tied to the relative worth of a target set. The intensity of attack is based on the target vulnerability and what must be done to the target to achieve the effect desired.

An **X** in the DISRUPT column indicates that it is beneficial to attack a target with the goal of disrupting the function of the target. This could be achieved by continuous suppression, neutralization, or destruction of the target by lethal means. In other cases, it could involve offensive EW for some target types. The enemy function represented by the target is considered unacceptable on the battlefield and must be removed.

An **X** in the DELAY column indicates it is beneficial to attack the target to delay its arrival on the battlefield. For instance, a commander could opt to use less ammunition and slow a second-echelon force for a given period. This would free his remaining fire support assets for a greater effort in close-in or rear operations. The delay would allow his maneuver forces to recover and refit. Then when the second echelon finally arrived at the FLOT, a coordinated attack could be launched. In this case, the unacceptable aspect of the target is its time of arrival. The implication is that the combined arms team can defeat such a target if given enough time to prepare.

An **X** in the LIMIT column indicates that a benefit can be gained if the target approach is limited. The desired effect in this case is diversion of the enemy unit to another part of the battlefield. This either puts the target in a part of the battlefield where it can be better handled or puts the enemy on unsuitable terrain.

There is one target set that always has the same relative value at division level and above. Nuclear and chemical support targets threaten any combat operation. The effects of nuclear and chemical weapons are often difficult to completely predict. These weapons complicate the planning process and threaten the commander's concept. Obviously, such weapons should be attacked with extreme vigor whenever they are found on the battlefield.

Attack Rationale Column

The result of the attack on each HVT and secondary effects on other target sets are determined during war-gaming. This information is recorded in the target spread sheet attack rationale column. This column gives commanders a general guide of the benefits derived from attacking targets in a particular target set. This column shows the desired objectives for attack of the targets in the set. Descriptions are connected to their set by lines. A solid line indicates the primary results of attacking targets in the set from which the line is drawn. These lines should be traced from left to right. Some descriptions are further attached to other sets by dotted lines. They indicate that a secondary benefit is achieved for that set when the primary set is attacked. These lines are traced from the attack rationale column back to the target set (right to left).